

Application Serial No. 10/613,322
Amendment Dated December 17, 2004
Reply to Office Action of November 17, 2004

Attorney Docket No. 89287.0002
Customer No.: 48195

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-50 (Canceled)

51. (Currently amended) The container assembly of claim 37, A self-contained, temperature-change container assembly comprising:
an inner container;
a jacket top ring disposed around a top surface of the inner container;
a jacket body disposed around the inner container;
a flexible jacket bottom secured to the jacket body, wherein the jacket top ring, the jacket body, and the jacket bottom enclose a first internal volume and a second internal volume outside of the inner container;
a reagent separator between the first internal volume and the second internal volume;
a first temperature-change reagent in the first internal volume;
a second temperature-change reagent in the second internal volume; and
a plurality of penetrators fixed to the jacket bottom;
wherein flexing the jacket bottom presses the penetrators through the reagent separator to breach the reagent separator and form a plurality of openings in the reagent separator to allow the first and second temperature-change reagents to mix to initiate a chemical temperature-change reaction;

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and further comprising a steam condenser formed of a material that has a high thermal conductivity in direct contact with the material of the inner container.

52. (Currently amended) The container assembly of claim ~~27~~ 51, wherein the steam condenser comprises steel wool.

53. (Currently amended) The container assembly of claim ~~27~~ 51, wherein the inner container includes a top surface exposed outside of the jacket top ring, ~~wherein the steam condenser comprises steel wool~~, and wherein the steam condenser is in direct contact with the inner container near the top surface of the inner container.

54-60. (Canceled)

61. (Currently amended) The method of claim 56, and further comprising A method for assembling a self-contained temperature-change container assembly, the method comprising:

packaging a product inside a sealed container;
installing a jacket top ring around a top surface of the sealed container;
installing a jacket body around the sealed container;
filling a first temperature-change reagent inside the jacket body and outside the sealed container in a first internal volume inside the jacket body;
installing a steam condenser between the sealed container and the jacket body before filling the first temperature-change reagent inside the jacket body;
providing a reagent separator inside the jacket body and outside the first temperature-change reagent;
filling a second temperature-change reagent inside the jacket body with the reagent separator between the second temperature-change reagent and the first temperature-change reagent; and

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installing a jacket bottom onto the jacket body;
wherein the jacket bottom is provided with a user-operable mechanism for
breaching the reagent separator to allow the first and second temperature-change
reagents to mix.

62. (Original) The method of claim 61, wherein installing the steam condenser includes filling a quantity of steel wool inside the jacket body and outside but in contact with the sealed container.

63-72. (Canceled)

73. (New) A self-contained, temperature-change container assembly comprising:

an inner container;
an outer jacket at least partially surrounding the inner container, wherein a first internal volume and a second internal volume are defined between the inner container and the outer jacket;
a first temperature-change reagent inside the first internal volume;
a steam condenser inside at least one of the first and second internal volumes;
a second temperature-change reagent inside the second internal volume;
a reagent separator between the first internal volume and the second internal volume;
a movable member situated opposite the reagent separator; and
at least one penetrator situated on the movable member;
wherein movement of the movable member urges the penetrator through the reagent separator to breach the reagent separator and to allow mixing of the first and second temperature-change reagents through said breach.

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74. (New) The container assembly of claim 73, wherein the inner container is a cylindrical metal can of a standard size.

75. (New) The container assembly of claim 73, wherein the movable member is a flexible jacket bottom, wherein the outer jacket comprises a jacket top ring disposed around a top surface of the inner container and a jacket body secured to the jacket top ring and disposed around the inner container, and wherein the flexible jacket bottom is secured to the jacket body.

76. (New) The container assembly of claim 73, wherein mixing the first and second temperature-change reagents initiates an exothermic reaction to increase the temperature of the inner container.

77. (New) The container assembly of claim 76, wherein the first temperature-change reagent is calcium oxide and the second temperature-change reagent is water.

78. (New) The container assembly of claim 73, wherein mixing the first and second temperature-change reagents initiates an endothermic reaction to reduce the temperature of the inner container.

79. (New) The container assembly of claim 73, wherein the reagent separator comprises a thin membrane.

80. (New) The container assembly of claim 79, wherein the thin membrane comprises a plastic film.

81. (New) The container assembly of claim 79, wherein the thin membrane comprises a metal foil.

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82. (New) The container assembly of claim 73, wherein the reagent separator is located at a step on an inner wall of the outer jacket.

83. (New) The container assembly of claim 73, wherein the movable member is a flexible member movable under pressure applied to the movable member on a side of the movable member opposite the second internal volume.

84. (New) The container assembly of claim 73, wherein the at least one penetrator comprises at least three penetrators mounted on the movable member and spaced apart from one another opposite the reagent separator.

85. (New) The container assembly of claim 84, wherein the at least one penetrator comprises at least five penetrators mounted on the movable member and spaced apart from one another opposite the reagent separator.

86. (New) The container assembly of claim 85, wherein the at least one penetrator comprises at least nine penetrators spaced apart from one another opposite the reagent separator.

87. (New) The container assembly of claim 73, wherein the steam condenser comprises a material having a high thermal conductivity in direct contact with the material of the inner container.

88. (New) The container assembly of claim 73, wherein the steam condenser comprises steel wool.

89. (New) The container assembly of claim 73, wherein the inner container includes a top surface exposes outside of the outer jacket, wherein the steam

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condenser comprises steel wool in the first internal volume, and wherein the steam condenser is in direct contact with the inner container near the top surface of the inner container.

90. (New) The container assembly of claim 73, and further comprising a thermal insulator in the first internal volume between the outer jacket and the first temperature change reagent.